EXHIBIT B
PENDING CLAIMS AFTER ENTRY OF INSTANT AMENDMENT

2. (Three Times Amended) The flow-through device of Claim 59 or 60 in which said porous substrate is about 1 mm to 20 mm thick.

3. (Three Times Amended) The flow-through device of Claim 59 in which said porous substrate has an average pore size of about 1 μm to about 250 μm.

4. (Three Times Amended) The flow-through device of Claim 59 or 60 in which said porous substrate has immobilized thereon about 2×10^{-19} to 2×10^{-15} nmol/nm^2 of said capture polynucleotide.

5. (Twice Amended) The flow-through device of Claim 59 or 60 in which said capture polynucleotide is covalently attached to the porous substrate.

6. (Twice Amended) The flow-through device of Claim 59 or 60 in which said capture polynucleotide is covalently attached to the porous substrate *via* a phosphodiester, phosphorothioate or phosphoramidate linkage.

7. (Twice Amended) The flow-through device of Claim 59 or 60 in which said capture polynucleotide is covalently attached to the porous substrate *via* a carboxyamide linkage.

8. (Three Times Amended) The flow-through device of Claim 59 or 60 in which said capture polynucleotide is covalently attached to the porous substrate *via* a linker.

9. (Three Times Amended) The flow-through device of Claim 59 or 60 in which said porous substrate is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

10. (Four Times Amended) The flow-through device of Claim 59 or 60 in which said porous substrate is composed of high density or ultra-high molecular weight polyethylene.

11. (Three Times Amended) The flow-through device of Claim 60 in which said porous substrate has a void volume in the range of about 1 $\mu l/cm^2$ to about 100 $\mu l/cm^2$.

13. (Three Times Amended) The flow-through device of Claim 59 in which the porous substrate has a porosity in the range of about 25 to 80%.

14. (Three Times Amended) The flow-through device of Claim 59 or 60 in which the capture polynucleotide is covalently immobilized on the porous substrate via its 5'- or 3'-terminal residue.

15. The flow-through device of Claim 14 further including a linker disposed between the porous substrate and the capture polynucleotide.

21. (Three Times Amended) The flow-through device according to Claim 59 or 60 further comprising a housing in which the three-dimensional porous substrate is disposed.

22. (Amended) The flow-through device of Claim 21, in which said housing is selected from the group consisting of a syringe barrel, a pipette, a disposable pipette tip, a chromatography column, a spin column, a microchannel, a capillary and a multi-well plate.

24. (Three Times Amended) The method of Claim 63 or 64 in which said target nucleic acid is applied to said flow-through device under conditions of high stringency.

25. (Three Times Amended) The method of Claim 63 or 64 in which said target nucleic acid is applied to said flow-through device under conditions of low stringency.

26. (Three Times Amended) The method of Claim 63 or 64 in which said target nucleic acid is applied to the flow-through device under conditions wherein it hybridizes with said capture polynucleotide in less than one minute.

27. (Three Times Amended) The method of Claim 63 or 64 in which said porous substrate of said flow-through device has an average pore size of about 1 μm to about 250 μm.

28. (Three Times Amended) The method of Claim 63 or 64 in which the density or surface concentration of said capture polynucleotide is about 2×10^{-19} to 2×10^{-15} nmol/nm^2.

29. (Twice Amended) The method of Claim 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device.

30. (Twice Amended) The method of Claim 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device *via* a phosphodiester, phosphorothioate or phosphoramidate linkage.

31. (Twice Amended) The method of Claim 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device *via* a carboxyamide linkage.

32. (Three Times Amended) The method of Claim 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device *via* a linker.

33. (Three Times Amended) The method of Claim 63 or 64 in which said porous substrate of said flow-through device is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

34. (Three Times Amended) The method of Claim 63 or 64 in which said porous substrate of said flow-through device is composed of high density or ultra-high molecular weight polyethylene.

35. (Three Times Amended) The method of Claim 63 or 64 in which said porous substrate of said flow-through device has a void volume in the range of 0.1 $\mu l/cm^2$ to about 100 $\mu l/cm^2$.

36. (Three Times Amended) The method of Claim 63 or 64 which further includes the step of washing said hybridized complex under conditions of moderate or high stringency.

40. (Three Times Amended) A method of determining whether a sample contains a target nucleic acid, said method comprising the steps of:

(a) flowing a sample suspected of containing a target nucleic acid through a flow-through device according to Claim 59 or 60 under conditions wherein the target nucleic acid and capture polynucleotide hybridize; and

(b) detecting the presence of hybrids, wherein a positive detection indicates the presence of the target nucleic acid in the sample.

41. The method of Claim 40, in which said target nucleic acid bears a reporter moiety and hybrids are detected by detecting the presence of said reporter moiety.

44. (Three Times Amended) A kit for capturing a target nucleic acid of interest from a sample, comprising:

a) a flow-through device according to Claim 59 or 60; and

b) a housing into which the flow-through device can be disposed.

50. (Three Times Amended) A kit for capturing a target nucleic acid from a sample comprising:

a) a three-dimensional porous substrate activated by plasma activation and having an average pore size of about 10 μm to about 100 μm and a porosity in the range of 25% to 80%; and

b) a capture polynucleotide capable of being covalently attached to the porous substrate.

51. The kit of Claim 50 further including a linker capable of being covalently attached to the porous substrate and the capture polynucleotide.

52. (Three Times Amended) A kit for capturing a target nucleic acid from a sample comprising:

a) a three-dimensional porous substrate activated by plasma activation and having an average pore size of about 10 μm to about 100 μm and a porosity in the range of 25% to 80%; and

b) means for generating a capture polynucleotide which is capable of hybridizing to the target nucleic acid and which is capable of being covalently attached to the porous substrate.

59. (Twice Amended) A flow-through device for capturing a target nucleic acid, comprising a three-dimensional porous substrate having covalently immobilized thereon a capture polynucleotide which is capable of hybridizing to the target nucleic acid, and wherein said porous substrate, prior to immobilization of the capture polynucleotide, is activated by plasma activation.

60. (Twice Amended) The flow-through device of Claim 59 wherein the three-dimensional porous substrate has an average pore size of about 10 μm to about 100 μm and a porosity in the range of about 25 to 80%.

63. A method of capturing a target nucleic acid from a sample, said method comprising flowing a sample containing or suspected of containing a target nucleic acid through a flow-through device according to Claim 59 under conditions wherein said target nucleic acid and capture polynucleotide hybridize to one another to form a hybridized complex, thereby capturing the target nucleic acid.

64. A method of capturing a target nucleic acid from a sample, said method comprising flowing a sample containing or suspected of containing a target nucleic acid through a flow-through device according to Claim 60 under conditions wherein said target nucleic acid and capture polynucleotide hybridize to one another to form a hybridized complex, thereby capturing the target nucleic acid.

65. The kit of Claim 50 or 51 in which the porous substrate is activated with about 6×10^{-17} to 9×10^{-15} nmol/nm^2 of a reactive group.

66. The kit of Claim 50 or 51 in which the porous substrate is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

67. (Amended) The kit of Claim 66 in which the porous substrate is composed of high density or ultra-high molecular weight polyethylene.